PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference HSFI20020081	**FOR FURTHER ACTION**	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/FI 03/00025	International filing date *(day/month/year)* 15.01.2003	Priority date *(day/month/year)* 16.01.2002
International Patent Classification (IPC) or both national classification and IPC B05C5/00, B05C5/00		
Applicant METSO PAPER, INC. et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

   ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

   - I ☒ Basis of the opinion
   - II ☐ Priority
   - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
   - IV ☐ Lack of unity of invention
   - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
   - VI ☐ Certain documents cited
   - VII ☐ Certain defects in the international application
   - VIII ☐ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
11.07.2003	29.04.2004
Name and mailing address of the international preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Jelercic, D Telephone No. +49 89 2399-2941

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/FI 03/00025

I. Basis of the report

1. With regard to the **elements** of the international application *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*:

Description, Pages

1-21 as originally filed

Claims, Numbers

1-20 as originally filed

Drawings, Sheets

1/5-5/5 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

   (Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-20
	No:	Claims	
Inventive step (IS)	Yes:	Claims	18-20
	No:	Claims	1-17
Industrial applicability (IA)	Yes:	Claims	1-20
	No:	Claims	

2. Citations and explanations

   see separate sheet

Re Item V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following documents:

D1: WO 01 02098 A (RANTANEN RAUNO) 11 January 2001
D2: EP-A-1 209 274 (VOITH PAPER PATENT GMBH) 29 May 2002 (2002-05-29)
D3: DE 93 02 905 U (KUESTERS EDUARD MASCHF) 30 June 1994 (1994-06-30)

The document **D1** was not cited in the international search report. A copy of the document is appended hereto.

Regarding independent claim 1

1. The document **D1** is regarded as being the closest prior art to the subject-matter of **claim 1**, and discloses (the references in parentheses applying to this document): a method for feeding a treating agent onto a moving surface (1), using a feed apparatus which comprises at least one feed chamber (17), which is provided with at least one inlet opening and with at least one outlet opening (18), and at least one nozzle plate (6) which is provided with holes (10) and which communicates with the at least one outlet opening (18) of said at least one feed chamber (17), the treating agent being passed from said at least one outlet opening (18) of said at least one feed chamber (17) through the holes (10) of said at least one nozzle plate (6) out, whereby a downwards moving first treating agent flow is formed out of the jets discharging from the holes (10) of said at least one nozzle plate (6) (cf. page 8, line 10 to page 9, line 30 and figures 1 and 3).

1.1 The subject-matter of **claim 1** therefore differs from **D1** in that an evening-out apparatus placed underneath the feed apparatus is additionally used in the method, which evening-out apparatus has at least one inclined surface which receives the first treating agent flow and which forms a downwards sloping flow path, on which an even laminar second treating agent flow is formed out of the first treating agent flow, which second treating agent flow is passed from the evening-out apparatus onto said moving surface.

1.2 The problem to be solved by the present invention may therefore be regarded as to even out non-uniformities in the flow.

1.3 The solution proposed in **claim 1** of the present application cannot be considered as involving an inventive step (Article 33(3) PCT) for the following reasons.

1.4 The features mentioned under paragraph **1.1** above are described in **D2** (paragraph [0038] and figure 1), which also concerns a curtain coating apparatus with an inclined surface. These features are disclosed as providing the same advantages and thus solving the same problems as in your application. It would therefore be obvious for the skilled person to include these features in the curtain coating apparatus described in document **D1** to solve the problem posed.

Regarding independent claim 8

2. The document **D1** is regarded as being the closest prior art to the subject-matter of **claim 8**, and discloses (the references in parentheses applying to this document): an apparatus for feeding a treating agent onto a moving surface (1), which apparatus includes a feed apparatus which comprises at least one feed chamber (17), which is provided with at least one inlet opening for the treating agent and with at least one outlet opening (18) for the treating agent, and at least one nozzle plate (6) which is provided with holes (10) and which communicates with said at least one outlet opening (18) of said at least one feed chamber (17), the treating agent flow moving from said at least one outlet opening (18) of said at least one feed chamber (17) through the holes (10) of said at least one nozzle plate (6) out, whereby the jets discharging from the holes (10) of said at least one nozzle plate (6) form a downwards moving first treating agent flow.

2.1 The subject-matter of **claim 8** therefore differs from **D1** in that the apparatus additionally comprises an evening-out apparatus which is placed underneath the feed apparatus and which has at least one inclined surface which receives the first treating agent flow and which forms a downwards sloping flow path, on which the first treating agent flow is formed into an even laminar second treating agent flow, which is passed from the evening-out apparatus onto said moving surface (cf. page 8, line 10 to page 9, line 30 and figures 1 and 3).

2.2 The solution proposed in **claim 8** of the present application cannot be considered as involving an inventive step (Article 33(3) PCT) for the following reasons.

2.3 The features mentioned under paragraph **2.1** above are described in **D2** (paragraph [0038] and figure 1), which also concerns a curtain coating apparatus with an inclined

surface. These features are disclosed as providing the same advantages and thus solving the same problems as in your application. It would therefore be obvious for the skilled person to include these features in the curtain coating apparatus described in document **D1** to solve the problem posed.

3. Dependent **claims 2-7** and **9-17** do not contain any features which, in combination with the features of any claim to which they refer, give rise subject-matter that involves inventive step (Article 33(3)PCT) as all the features introduced with these claims seem to be known while used with a corresponding technical effect and/or seem to be minor workshop variants which come within the scope of customary practice followed by persons skilled in the art. Compare the features introduced with

- claims 2-7 and 9-15 with **D1** (see column 10, line 17 and column 15, line 55 and figure 1);
- claims 16, 17 with **D3** (see page 4 and figure 1, 2).

3.1 Dependent **claims 18-20** meet the requirements of novelty, inventive step and industrial application according to Articles 33(2) to 33(4) PCT.

3.2 The subject-matter of dependent **claims 18-20** is novel as none of the prior art documents cited in the Search Report or acknowledged in the description discloses all of the features of these claims.

3.3 The documents cited in the Search Report do not render any suggestion to the skilled person to construct an apparatus for feeding a treating agent onto a moving surface disclosed in the present application according to the further features of either of dependent **claims 18-20**. The features concerning the mutual arrangement of the apparatus and the trailing edge of the inclined surface resting against a rotating cylindrical surface result from a step being non-obvious in view of the cited prior art documents in which no incentive is given to provide this specific structure and arrangement. Thus the apparatus according to either of dependent **claims 18-20** involves an inventive step.